

IN THE DRAWINGS:

Figures 2-9:

Please substitute the attached clean copies of Figures 2-9 for the originally-filed drawings of Figures 2-9.

REMARKS

Summary

Clean copies of Figures 2-9 are being submitted herewith to overcome a formal objection thereto and Claim 1 has been amended to overcome a substantive rejection thereto. Therefore, the application is now in allowable form.

Status of the Claims

Claims 1-3 are pending, with Claim 1 being the only independent claim. Claims 1-3 have been amended for reasons unrelated to patentability to improve their form and Claim 1 has been amended more clearly to recite the novel features of the present invention.

Drawing Objection

Figures 2-9 have been objected to because they contain stray marks in the middle thereof. In response, corrected formal drawings of Figures 2-9 are attached herewith that do not contain the stray marks objected to by the Examiner, thereby obviating the objection.

Substantive Rejection

Claims 1-3 are rejected under 35 U.S.C. § 103(a), as being unpatentable over the patent to Leturmy et al. (U.S. Patent No. 6,311,904) in view of the publication to Christiani et al. (U.S. Patent Application Publication No. 2003/0183705), the patent to Prew et al. (U.S. Patent No. 5,257,740) and the patent to Aoki et al. (U.S. Patent No. 6,568,612).

Response to Substantive Rejection

In response, while not conceding the propriety of the rejection, independent Claim 1 has been amended. Applicants submit that as amended, Claim 1 is allowable for the following reason.

Amended independent Claim 1 relates to a method of recycling a plastic material of a process cartridge including metal materials, toner particles, and plastic materials of at least two different colors. The method comprises the step of crushing the process cartridge while collecting particles on the process cartridge by suction in a first crushing step, the particles including toner particles. The method also comprises the steps of adjusting the size of the crushed plastic materials in a secondary crushing step, and separating a plastic material having a specific color density from the other plastic materials of the size-adjusted, crushed plastic materials, separated from the remaining toner particles, in a color selection step.

Claim 1 has been amended to recite that the crushing step crushes the process cartridge and separates metal materials from the plastic materials of the process cartridge while collecting particles on the process cartridge by suction. Claim 1 has also been amended to recite the steps of removing metal materials from the plastic materials in a magnetic selection step, and collecting remaining toner particles on the size-adjusted crushed plastic materials in an air selection step.

By collecting particles in the first crushing step and by collecting toner particles on size-adjusted crushed plastic materials after the secondary crushing step, the collection of toner in the crevices of the crushed plastic materials can be improved.

Claim 1 is allowable over the documents to Leturmy et al., Christiani et al., Prew et al., and Aoki et al. for at least four reasons.

First, the first crushing step recited in amended Claim 1 is not understood to be disclosed or suggested in the cited documents. And the citation of documents lacking this feature proves fatal to establishing a prima facie case of obviousness against amended Claim 1 over these documents, since MPEP § 2142 places the burden on the Patent Office to cite art disclosing or suggesting *all* the claimed features. More specifically, the first crushing step requires that the process cartridge be crushed and metal materials be separated from plastic materials while toner particles on the process cartridge are collected by suction. In contrast, the reference cited to show this first crushing step, the Leturmy et al. patent, is understood to merely show the grinding of a toner cartridge with a grinder 5 and the recovery of toner by bellows 22 and a suction system 25. No separating of metal materials from plastic materials while collecting toner is understood to be disclosed. In addition, the other applied documents are also not understood to disclose or suggest the step of crushing a process cartridge and separating metal materials from the plastic materials of the process cartridge while collecting toner particles on the process cartridge by suction, as recited by amended Claim 1. Since the applied art is not understood to disclose or suggest this first crushing step, MPEP § 2142 prohibits the Office from establishing a prima facie case of obviousness against Claim 1 over this art for this reason.

Second, the collecting step recited in amended Claim 1 is not understood to be disclosed or suggested in the cited documents. And therefore, for this additional reason, the Office is prohibited under MPEP § 2142 from establishing a prima facie case of obviousness against amended Claim 1 over these documents. Moreover, the Office Action does not even allege that

the documents to Leturmy et al., Christiani et al., Prew et al., or Aoki et al. disclose or suggest the earlier version of this feature, i.e., the step of separating remaining toner particles from the size-adjusted crushed plastic materials in an air selection step. Rather, the Patent Office merely cites the Leturmy et al. patent to show the claimed first crushing step, and column 2, lines 15-23 of the Prew et al. patent to show the secondary crushing step. But the Leturmy et al. patent, as noted above, is understood to merely show the grinding of a toner cartridge with a grinder 5 and the recovery of toner by bellows 22 and a suction system 25. No collecting of remaining toner particles on size-adjusted crushed plastic materials, crushed in a secondary crushing step, is understood to be disclosed. And the cited portion of the Prew et al. patent is understood to merely disclose the use of a single particulate-impurity removal step in a process for recycling scrap film used, for example, in consumer products such as grocery bags, laundry bags, food wrap, and industrial materials such as stretch wrap, and agricultural film, as discussed at column 1, lines 10 through 15. No collecting of remaining toner particles as recited in Claim 1 is discussed in this passage. And no collecting of remaining toner particles on twice crushed, process-cartridge plastic materials as recited in Claim 1 is discussed in this passage:

Another preferred embodiment of the invention is a process for recycling scrap film. The process comprises wetting the scrap film with an appropriate liquid. The wet scrap film is subsequently washed and shredded. Particulate impurities including at least one of dirt, metal, wood, glass, heavy plastic, and heavy paper are removed from the washed and shredded scrap film. Subsequently, the scrap film is cut, and is then rinsed.

Page 5 of the Office Action responds to Applicants' previous argument along these lines as follows:

Applicant argues that the references of record do not disclose "the step of separating remaining toner particles from size-adjusted, twice-crushed, process cartridge plastic materials" (page 13). However, the combination of Lecturmy, Christiani, Prew, and Aoki disclose the limitation as discussed above in the claim rejections under 35 U.S.C. 103 above. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

But the Office Action's argument is inapplicable in this case. The statement "one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references", comes from MPEP § 2145. MPEP § 2145 relates to arguments an Applicant makes to rebut a prima facie case of obviousness *once a prima facie case of obviousness is already established*. Here, a prima facie case of obviousness against amended Claim 1 has not yet been established, because the Office Action is understood to have failed to cite any art or to identify any passage of any applied reference showing the collecting step recited by Claim 1. Thus, the Office Action cannot rebut Applicants' patentability argument on this basis. Rather, the Office is still under an obligation to satisfy its burden of proof to establish a prima facie case of obviousness by citing art showing the claimed collecting step recited in Claim 1. Absent such a showing, as is the case here, the Office has not established a prima facie case of obviousness against amended Claim 1.

Third, the citations to Christiani, et al., Prew, et al., and Aoki, et al., are not understood to be analogous art to the citation to Leturmy et al., as required by MPEP § 2141.01(a), and are therefore, not properly combinable therewith. This section of the MPEP requires that the references must "either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned". Here, both the Leturmy et al. patent and Claim 1 are directed to a method of recycling plastic material of a

process cartridge. Such a process cartridge is susceptible to a dust explosion during recycling before the plastic material of a specific color density is selected, as discussed at pages 1-4 of the specification, and as discussed in column 1 of the Leturmy et al. patent. Thus, for the citations to Christiani, et al., Prew, et al., and Aoki, et al. to be analogous art so that they can be combined with the Leturmy et al. patent, they should relate to a method of recycling plastic material of a process cartridge or be pertinent to solving the dust-explosion problem in such a process cartridge. But they do not.

Rather, the Christiani, et al. publication is understood to relate to “a method for the dry separation of unsorted garbage that contains packaging waste consisting of plastic material of various polymer groupings” (paragraph [0001]) such as “residual waste such as glass and ceramic shards, diapers, coffee grounds and other household waste components such as plastic articles, like, for example, plastic cups, bowls and tubes” (paragraph [0025]). The Prew, et al. patent is understood to relate to the “recycling of contaminated scrap film” (col. 1, lines 30-32) and “recycling thin film” (col. 1, lines 34 and 35). And the Aoki, et al. patent is understood to relate to enhancing “the quality of recovered valuables which are obtained by pulverizing waste ” (col. 2, lines 51-55) including “OA equipment to be wrecked ... [including] a desk-top personal computer, a notebook-type personal computer, a display unit, a printer, a copier, a facsimile machine, and the like” (col. 5, lines 40-47).

Since these citations are not understood to relate to a method of recycling plastic material of a process cartridge, these citations are not understood to be in the field of Applicants’ endeavor, as required by MPEP § 2141.01(a). In addition, because these citations are not understood to recognize or solve the problem of a dust explosion that can occur when recycling a process cartridge that includes toner particles and metal materials, these citations are not understood to be “reasonably pertinent to the particular problem with which the inventor was

concerned”, as also required by MPEP § 2141.01(a). Therefore, these citations are understood to be non-analogous art and are not properly combinable with the Leturmy et al. patent. For this additional reason, the Office has failed to satisfy its burden of proof to establish a prima facie case of obviousness against Claim 1.

Page 5 of the Office Action responds to Applicants’ previous argument along these lines as follows:

Applicant also argues that there is no motivation to combine Lecturmy and Christiani because Christiani does not solve the dust explosion issue. However, there is a motivation to combine Christiani as discussed above in the claim rejections under 35 U.S.C. 103. The fact that Christiani does not solve the dust explosion issue is not relevant. There are also motivations to combine Prew and Aoki as discussed above in the claim rejections under 35 U.S.C. 103.

But these statements mischaracterize the requirements to establish a prima facie case of obviousness. The legal test for combining the citations to Christiani, et al., Prew, et al., and Aoki, et al. with the Leturmy et al. patent is that these references must “either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned”, in accordance with MPEP § 2141.01(a). As noted above, the citations to Christiani, et al., Prew, et al., and Aoki, et al. are not in the field of Applicants’ endeavor, nor are they reasonably pertinent to the problem the inventor was trying to solve. Therefore, under MPEP § 2141.01(a), the Office Action has not established the propriety of combining these citations with the Leturmy et al. patent to produce the claimed invention. Accordingly, the Office Action has not established a prima facie case of obviousness against Claim 1 for this additional reason.

Fourth, even if the citations to Christiani, et al., Prew, et al., and Aoki, et al. are analogous art, they are not understood to provide the factual basis to modify the Leturmy, et al. method to produce the invention of amended Claim 1. To modify the Leturmy et al. patent to produce the claimed invention, MPEP § 2142 requires that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings”. But, the Office Action has not pointed to any passage in the citations to Christiani, et al., Prew, et al., and Aoki, et al. suggesting that the recycling of emptied photocopier toner cartridges taught, for example, by the Leturmy et al. patent, should be improved by adding the removing, adjusting, collecting, or plastic-material separating steps recited by amended Claim 1. Therefore, the factual basis for the Office Action’s argument that it would be obvious to combine these documents to produce the invention of Claim 1 is not understood to exist. As a result, for this additional reason, the Office is not understood to have established a prima facie case of obviousness against amended Claim 1.

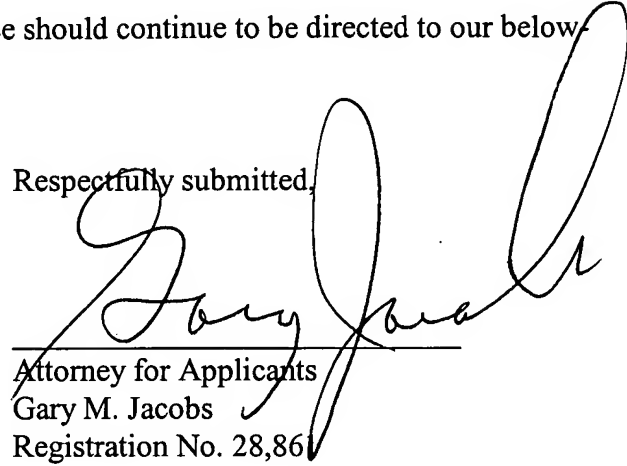
The dependent claims are allowable for the reasons given for the independent claims and because they recite features that are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

Conclusion

In view of the above amendments and remarks, the application is now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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